WHAT IS CLAIMED IS:

1   1.   A method for discovering a power level in a diode

2   discovery circuit comprising:

3   transmiting a pulse signal from a diode discovery device

4   on a first line;

5   receiving the pulse signal in the diode discovery device

6   on a second line;

7   measuring a time to charge a capacitor in response to

8   applying power to determine the power level; and

9   applying power in response to comparing the transmitted

10   pulse signal to the received pulse signal and to measuring the

11   time.

1   2.   The method of claim 1 in which the pulse signal includes

2   a pseudo random generated 11-bit word.

1   3.   The method of claim 2 in which the pseudo random

2   generated 11-bit word is generated by a recursive linear

3   function.

1   4.   The method of claim 3 in which the recursive linear

2   function is $X(n) = X[n-11] + X[n-9]$ (modulo 2).

1   5.   The method of claim 2 in which the pseudo random

2   generated 11-bit word is seeded by a port number of the diode

3   discovery device.

1   6.   The method of claim 1 further comprising repeating the

2   transmitting and receiving.

1   7.   A computer program product residing on a computer

2   readable medium having instructions stored thereon which, when

3   executed by the processor, cause the processor to:

4   transmit a pulse signal from a diode discovery device on

5   a first line;

6   receive the pulse signal in the diode discovery device on

7   a second line;

8   measure a time to charge a capacitor in response to

9   applying power to determine the power level; and

10   apply power in response to comparing the transmitted

11   pulse signal to the received pulse signal and to the measured

12   time.

1   8.   The computer program product of claim 7 in which the

2   pulse signal includes pseudo random generated 11-bit word.

1   9.   The computer program product of claim 8 in which the

2   pseudo random generated 11-bit word is generated by a

3   recursive linear function.

1   10.   The computer program product of claim 9 in which the

2   recursive linear function is $X(n) = X[n-11] + X[n-9]$ (modulo

3   2).

1   11.   The computer program product of claim 8 in which the

2   pseudo random generated 11-bit word is seeded by a port number

3   of the diode discovery device.

1   12.   A diode discovery system comprising:

2   a diode discovery process controller to:

3   transmit a pulse signal from the controller on

4   a first line;

5   receive the pulse signal in the controller on a

6   second line;

7   measure a time to charge a capacitor in a diode

8   detection circuit in response to applying power to

9   determine the power level;

10   apply power in response to comparing the

11   transmitted pulse signal to the received pulse

12   signal and to the measured time;

13   a voltage source connected to the controller; and

14   a power converter linked to the diode detection circuit.

1   13.   The system of claim 12 in which the pulse signal includes

2   pseudo random generated 11-bit word.

1   14.   The system of claim 13 in which the pseudo random

2   generated 11-bit word is generated by a recursive linear

3   function.

1   15. The system of claim 14 in which the recursive linear

2   function is X(n) = X[n-11] + X[n-9] (modulo 2).

1   16. The system of claim 13 in which the pseudo random

2   generated 11-bit word is seeded by a port number of the diode

3   discovery device.

1   17. The system of claim 12 further comprising means for

2   repeating the pulse signal.